

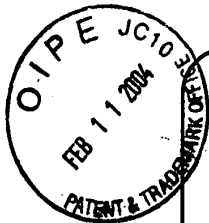
2.
image

Please type a plus sign (+) inside this box →



Based on PTO/SB/21 (05-03)
Approved for use through 04/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond
to a collection of information unless it displays a valid OMB control number.

2825/18



TRANSMITTAL FORM (to be used for all correspondence after initial filing)		Application Number	10/039,618
		Filing Date	1/4/02
		First Named Inventor	Steven Teig
		Group Art Unit	2825
		Examiner Name	Lin, Sun J.
Total Number of Pages in This Submission		Attorney Docket Number	SPLX.P0049

Enclosures (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an application)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declarations(s)	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosures (Listed below): Postcard Form 1449 83 cited references Credit Card Payment Form
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Documents	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Response to Missing Parts/Incomplete Application	Remarks:	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Or Individual name	Earl Brown, Reg. No. 44,042 of Stattler Johansen & Adeli LLP
Signature	<i>Earl Brown</i>
Date	February 9, 2004

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Services as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date: 2/9/04

Typed or printed name	Earl Brown		
Signature	<i>Earl Brown</i>	Date	February 9, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



PATENT
Docket No. SPLX.P0049

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 9, 2004.

Earl Brown

Earl Brown

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Steven Teig

Serial No.: 10/039,618

Filing Date: 1/4/02

For: METHOD AND APPARATUS FOR
GENERATING ROUTES FOR GROUPS
OF NODE CONFIGURATIONS.

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit with this Information Disclosure Statement the attached Form PTO-1449, and copies of the documents listed in the 1449 form for consideration by the Examiner. The Examiner is requested to make these documents of record. Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

02/12/2004 MKOCHA1 00000025 10039618

01 FC:1006

100.00 OP

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

This Information Disclosure Statement is submitted after receipt of a first Office Action on the merits but before the Final Office Action. Accordingly, a fee is required. The requisite fee is attached.

However, in the unlikely event that the Patent Office determines that additional fees, extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-1128** referencing SPLX.P0049. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: February 9, 2004

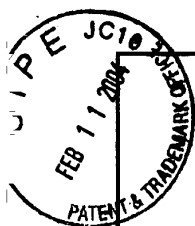
Respectfully submitted,

By: Earl Brown

Earl Brown
Registration No. 44,042

Stattler, Johansen & Adeli LLP
P.O. Box 51860
Palo Alto, CA 94303-0728

Phone No. (650) 752-0990 x103
Fax No. (650) 752-0995

Please type a plus sign (+) inside this box → 

Substitute for form 1449A/PTO				Application Number	10/039,618
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
Sheet	1	of	7	Attorney Docket Number	SPLX.P0049

U.S. PATENT DOCUMENTS						
Examiner* Initials	Cite No.	U.S. Patent Document		Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	1.	2001/0009 031	A1	07-19-2001	Nitta et al.	
	2.	2002/0182 844	A1	12-05-2002	Igarashi et al.	
	3.	2003/0005 399	A1	01-02-2003	Igarashi et al.	
	4.	5,267,176		11-30-1993	Antreich et al.	
	5.	5,566,078		10-15-1996	Ding et al.	
	6.	5,618,744		04-08-1997	Suzuki et al.	
	7.	5,635,736		06-03-1997	Funaki et al.	
	8.	5,637,920		06-10-1997	Loo	
	9.	5,640,327		06-17-1997	Ting	
	10.	5,663,891		09-02-1997	Bamji et al.	
	11.	5,757,089		05-26-1998	Ishizuka	
	12.	5,784,289		07-21-1998	Wang	
	13.	5,838,583		11-17-1998	Varadarajan et al.	
	14.	5,889,677		03-30-1999	Yasuda et al.	
	15.	5,980,093		11-09-1999	Jones et al.	
	16.	6,070,108		05-30-2000	Andreev et al.	
	17.	6,128,767		10-03-2000	Chapman	
	18.	6,150,193		11-21-2000	Glenn	
	19.	6,209,123	B1	03-27-2001	Maziasz et al.	
	20.	6,219,832	B1	04-17-2001	Buzbee	

Examiner Signature		Date Considered	
-------------------------------	--	----------------------------	--

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → ☐

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO				Application Number	10/039,618
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
				Attorney Docket Number	SPLX.P0049
Sheet	2	of	7		

U.S. PATENT DOCUMENTS						
	21.	6,226,560	B1	05-01-2001	Hama et al.	
	22.	6,249,902	B1	06-19-2001	Igusa et al.	
	23.	6,253,363	B1	06-26-2001	Gasarov et al.	
	24.	6,307,256		10-23-2001	Chiang et al.	
	25.	6,316,838	B1	11-13-2001	Ozawa et al.	
	26.	6,324,674	B2	11-27-2001	Andreev et al.	
	27.	6,324,675	B1	11-27-2001	Dutta et al.	
	28.	6,327,693	B1	12-04-2001	Cheng et al.	
	29.	6,330,707	B1	12-11-2001	Shinomiya et al.	
	30.	6,407,434	B1	06-18-2002	Rostoker et al.	
	31.	6,415,422	B1	07-02-2002	Mehrotra et al.	
	32.	6,442,743	B1	08-27-2002	Sarrafzadeh et al.	
	33.	6,448,591	B1	09-10-2002	Juengling	
	34.	6,473,891	B1	10-29-2002	Shively	
	35.	6,480,991	B1	11-12-2002	Cho et al.	
	36.	6,519,751	B2	02-11-2003	Sriram et al.	
	37.	6,543,043	B1	04-01-2003	Wang et al.	
	38.	6,546,540	B1	04-08-2003	Igarashi et al.	
	39.	6,557,145	B2	04-29-2003	Boyle et al.	
	40.	6,567,967	B2	05-20-2003	Greidinger et al.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

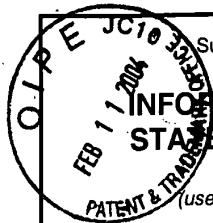
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → ☐

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO				Application Number	10/039,618
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
Sheet	3	of	7	Attorney Docket Number	SPLX.P0049

FOREIGN PATENT DOCUMENTS							
Examiner* Initials	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴				
	41.	JP	411296560	A	Matsumoto et al.	10-29-1999	with English translation of Abstract;
	42.	JP	2000-82743	A	Igarashi et al.	03-21-2000	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
	43.	JP	H03-173471	A	Tawada et al.	07-26-1991	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
	44.	JP	H05-243379	A	Masako Kubota	09-21-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
	45.	JP	H05-102305	A	Akihiro Sato	04-23-1993	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
	46.	JP	H07-86407	A	Shinpei Miura	03-31-1995	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

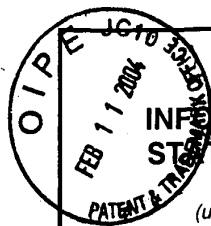
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → ☐

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	10/039,618
				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
Sheet	4	of	7	Attorney Docket Number	SPLX.P0049

FOREIGN PATENT DOCUMENTS								
	47.	JP	H09-162279	A	Masaaki Yoshida	06-20-1997	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓

Examiner Signature		Date Considered	
---------------------------	--	------------------------	--

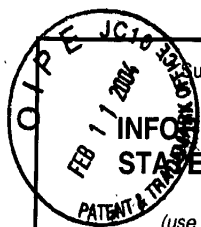
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → ☐

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO				Application Number	10/039,618
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
Sheet	5	of	7	Attorney Docket Number	SPLX.P0049

FOREIGN PATENT DOCUMENTS				
NON PATENT LITERATURE DOCUMENTS				
Examiner* Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	48.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.		
	49.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.		
	50.	Brambilla, A. et al., Statistical Method for the Analysis of Interconnects Delay in Submicrometer Layouts, IEEE, 8/2001, pp. 957-966.		
	51.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.		
	52.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.		
	53.	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.		
	54.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, iss. 3A, pp. 929-933.		
	55.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborescence Problem with Applications to VLSI Physical Design, Cadence Design Systems and UCLA Computer Science Department, pp.88-95.		
	56.	Cong, J. et al., Performance-Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.		
	57.	Enbody, R. et al., Near-Optimal n-Layer Channel Routing, 23 rd Design Automation Conference, 1986, pp. 708-714.		
	58.	Fang, S. et al., Constrained Via Minimization with Practical Considerations for Multi-Layer VLSI/PCB Routing Problems, 28 th ACM/IEEE Design Automation Conference, 1991, pp. 60-65.		
	59.	Hom, I. et al., Estimation of the Number of Routing Layers and Total Wirelength in a PCB Through Wiring Distribution Analysis, 1996, pp. 1-6.		
	60.	Hong, X. et al., Performance-Driven Steiner Tree Algorithms for Global Routing, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 177-181.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

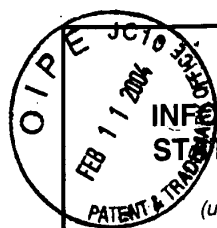
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → ☐

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO				Application Number	10/039,618
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
Sheet	6	of	7	Attorney Docket Number	SPLX.P0049

FOREIGN PATENT DOCUMENTS		
61.	Hu, J. et al., A Timing-Constrained Algorithm for Simultaneous Global Routing of Multiple Nets, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000, pp.99-103.	
62.	Kastner, R. et al, Predictable Routing, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000. pp. 110-113.	
63.	Khoo, K. et al., An Efficient Multilayer MCM Router Based on Four-Via Routing, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 590-595.	
64.	Lillis, J. et al., Table-Lookup Methods for Improved Performance-Driven Routing, 1998, pp. 368-373.	
65.	Lipski, W. et al., A Unified Approach to Layout Wirability, Mathematical Systems Theory, 1987, pp. 189-203.	
66.	Lodi, E. et al., A Preliminary Study of a Diagonal Channel-Routing Model, Algorithmica, 1989, pp.585-597.	
67.	Lodi, E. et al., Lecture Notes in Computer Science, A 4d Channel Router for a Two Layer Diagonal Model, pp. 464-476, July 1988.	
68.	Naclerio, N. et al., Via Minimization for Gridless Layouts, 24 th ACM/IEEE Design Automation Conference, 1987, pp. 159-165.	
69.	Nam, G. et al, Satisfiability-Based Layout Revisited: Detailed Routing of Complex FPGAs Via Search-Based Boolean SAT, 1999, pp. 167-175..	
70.	Oh, J. et al., Constructing Lower and Upper Bounded Delay Routing Trees Using Linear Programming, 33 rd Design Automation Conference, 1996.	
71.	Partitioning Logic on to Graph Structure, IBM Technical Disclosure Bulletin, February 1990, vol. 32, iss. 9A, pp. 469-475.	
72.	Phillips, N., Channel Routing by Constraint Logic, Department of Computer Science Southern Illinois University, ACM, 1992.	
73.	Takashima, Y. et al, Routability of FPGAs with Extremal Switch-Block Structures, IEICE Trans. Fundamentals, vol. E81-A, No. 5, May 1998, pp. 850-856.	

Examiner Signature	Date Considered
--------------------	-----------------

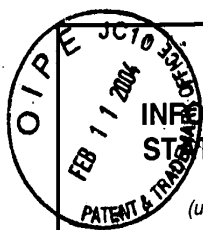
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box → ☐

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO				Application Number	10/039,618
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Filing Date	1/4/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Lin, Sun J.
Sheet	7	of	7	Attorney Docket Number	SPLX.P0049

FOREIGN PATENT DOCUMENTS		
74.	Thakur, S. et al., Algorithms for a Switch Module Routing Problem, 1994, pp. 265-270.	/
75.	Theune, D. et al., HERO: Hierarchical EMC-constrained routing, 11/1992, IEEE pp 468-472	/
76.	Tseng, H., Timing and Crosstalk Driven Area Routing, pp. 378-381.	/
77.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28 th ACM/IEEE Automation Conference, 1991, pp. 49-53.	/
78.	Wang, M. et al., Modeling and Minimization of Routing Congestion, Jan. 2000, IEEE proceedings of ASP-DAC, Asia and South Pacific, pp. 185-190.	/
79.	Wood, G. et al., FPGA Routing and Routability Estimation Via Boolean Satisfiability, Department of Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA, pp. 119-125.	/
80.	Zhang, C.X. et al., Floorplan Design Using a Hierarchical Neural Learning Algorithm, IEEE, 6/1991. pp. 2060-2063.	/
81.	Zhou, H. et al., An Optimal Algorithm for River Routing with Crosstalk Constraints, 1996.	/
82.	Zhou, H. et al., Global Routing with Crosstalk Constraints, Department of Computer Sciences, University of Texas, 1998, pp. 374-377.	/
83.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514.	/

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number(optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.